

Basel TWG Adopts Guidelines for Recycling Battery Scrap

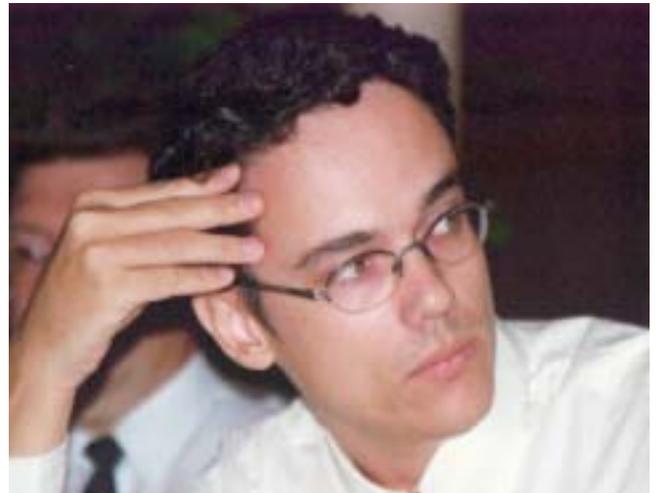
At the nineteenth session of the Technical Working Group (TWG) of the Basel Convention held at the *Palais des Nations*, Geneva, in January of this year the delegates provisionally adopted the revised "Technical Guidelines for the Environmentally Sound Management of Lead-Acid Battery Wastes".

The revised set of guidelines was presented to the TWG by Ms Zilda Maria Faria Veloso the head of the Brazilian delegation. Ms Veloso explained that following the recommendations made at the last session, the author of the guidelines, Mr. Marcelo Jost of the Brazilian Institute of the Environment and Natural Renewable Resources (IBAMA), had chaired a small subcommittee that prepared a new chapter to cover the assessment of national priorities, regional recovery options, policy frameworks for waste collection schemes, communications and community relations.

ILMC Program Manager, Mr. Brian Wilson, thanked the Brazilian Delegation for the opportunity to contribute to the new guidelines through the subcommittee. He stated that in the opinion of the Center, the new guidelines were technically sound and entirely practicable, providing the most comprehensive advice on the environmentally sound recovery of leaded waste materials currently available. He felt that the guidelines should be of value to any government or business wishing to introduce policies to raise the standards of occupational health and enhance environmental performance.

However, some of the delegations who were not represented on the subcommittee, stated that whilst they felt that the draft guidelines submitted to the TWG for adoption were sound, there were a number of issues that needed further clarification. The Danish delegation asked for the guidelines to include advice on prolonging automotive battery life and a new de-sulfurizing technology. The German delegate asked for a

paragraph to clarify the action required to minimize the adverse effects of fugitive emissions and for the inclusion of stricter dioxin emission limits. On the same subject the UK delegate asked for the references to the adverse health effects of dioxins to be checked and if necessary revised.



Mr. Marcelo Jost, author of the Technical Guidelines , (IBAMA).

The representative from the United Nations Conference on Trade and Development (UNCTAD) suggested that the section covering the methods of recycling needed to be restructured to facilitate a comparison of the impacts of the different technologies and that there was a need for a more detailed explanation of the appropriate strategies and policies associated with "internal" recycling.

The Brazilian Delegation undertook to include all the suggestions made by the various delegations and on that basis the Guidelines were provisionally adopted under the direction of the TWG Chair, Ms. Riitta Leinen of Finland. It is anticipated that the final version of the guidelines will be available to the delegates prior to the next meeting scheduled for May 2002.

Brunswick Smelter

Noranda's [Brunswick lead smelter](#) at Belledune, New Brunswick underwent substantial changes between the years 1989 and 2000. Annual production of refined lead and lead alloys grew from 54,000 metric tons in 1989 to 104,000 metric tons by 2000. The smelter's occupational health, safety and environmental performance also improved over the same period.

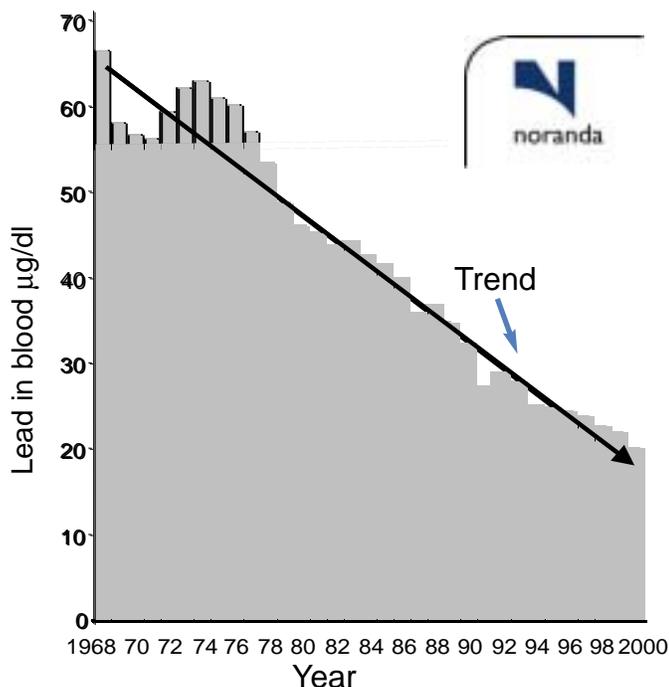


Chart 1. Decline in Average Lead in Blood Levels 1968 - 2000

The New Brunswick area has a long history of mineral development. Coal has been mined in the province for centuries and small quantities of natural gas were discovered early in the 20th century. The base metal mines in the northeast were not developed until the late 1950's and potash mine development in the south is the most recent. The Brunswick mine near Bathurst, New Brunswick started production in 1964, processing a complex and fine-grained massive sulfide ore containing zinc, lead, silver and copper. Some of the ore was processed to produce copper, lead and zinc concentrates and quantities of refractory ore were processed to produce copper and bulk (zinc-lead) concentrates. The smelter entered production as an Imperial smelter in 1967, processing the bulk concentrate and producing refined lead, zinc and silver. A sulfuric acid plant and fertilizer plant were commissioned the following year.

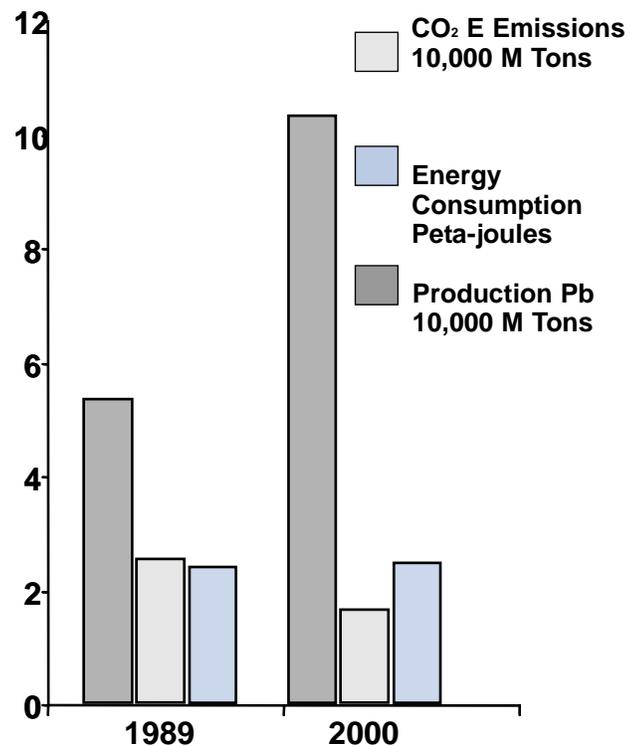


Chart 2. Changes in Production, Energy Consumption & CO2 Emissions 1989 - 2000

The original smelter has undergone many changes since 1967 and was eventually converted to a conventional blast furnace in 1972. Since that time, the process has consisted of a sinter machine, blast furnace, thermal refinery and single absorption sulfuric acid plant. An on-site distillation plant improves energy efficiency by enriching the furnace blast air with oxygen in order to reduce heat losses. An effluent treatment plant and a new solid residue handling and water management system were commissioned in 1980 when environmental monitoring revealed increasing cadmium levels in locally caught lobsters. The plant remained a captive smelter, relying almost exclusively on low-grade lead concentrate from the Brunswick mine and producing refined lead, Doré metal bullion (an impure silver bullion) and sulfuric acid for conversion to diammonium phosphate at a nearby fertilizer manufacturing plant.

The operating strategy changed in 1990 in response to advances in mineral processing and increased pressure to enhance financial performance. The Brunswick mine improved process selectivity and increased concentrate grades. Although the quantity of lead and silver contained in the lead concentrate declined slightly,

..... Reaps the Benefits

the lower sulfur content increased the capacity of the smelter. The Brunswick mine continued to be the major supplier, but the [smelter](#) management were now able to seek out new suppliers of concentrate and secondary materials and so began the transition towards becoming a custom smelter.

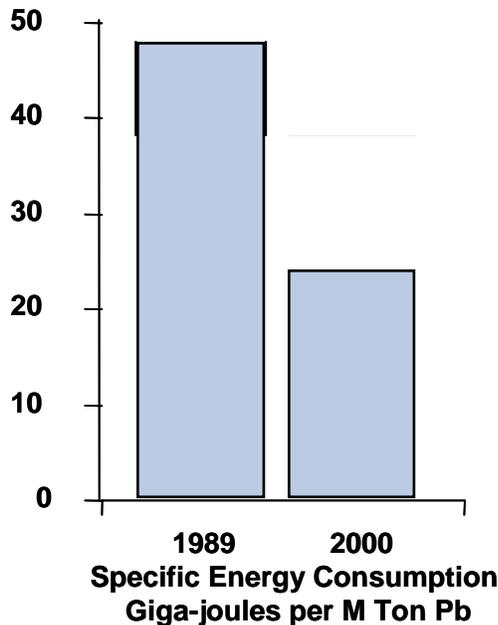


Chart 3. Relative Changes in Energy Consumption 1989 - 2000

Other milestones include the addition of two short rotary furnaces in 1988, a [battery breaker](#) and a bulk handling facility for moving concentrates and managing the storage.

The smelter management team had well-established environmental and occupational health programs in place prior to 1989, but increasing concerns about workers health contributed to an extended strike in 1990. In response, Noranda improved ventilation and extraction controls systems, but also recognized the need to promote improved personal hygiene, the proper use and maintenance of personal protective equipment, including respirators and the introduction of safer work practices. An occupational health study was launched in 1992 and the results confirmed that some current and former employees had been affected by past exposures. Although the study concluded that the programs in place had reduced workplace exposures to lead in blood levels that were considered to be safe, as the trend line shows in Chart 1, it reinforced the importance of education and training as well as engineering and administrative controls.

[Energy consumption](#) and global warming are key environmental indicators and Chart 2 shows the absolute changes in these indicators over the period from 1989 to 2000 in production, energy consumption and atmospheric emissions of greenhouse gases (expressed in carbon dioxide (CO₂) equivalents). Whilst production increased by over 91%, energy consumption went down by 3.6% and all this was achieved with a limited investment and only a 3.3% increase in greenhouse gas emissions. Chart 3 shows a reduction of nearly 50% in energy consumption per metric ton of lead production from 1989 to 2000, and over the same period Chart 4 shows that greenhouse gas emissions were reduced by just over 46% for every metric ton of lead produced.

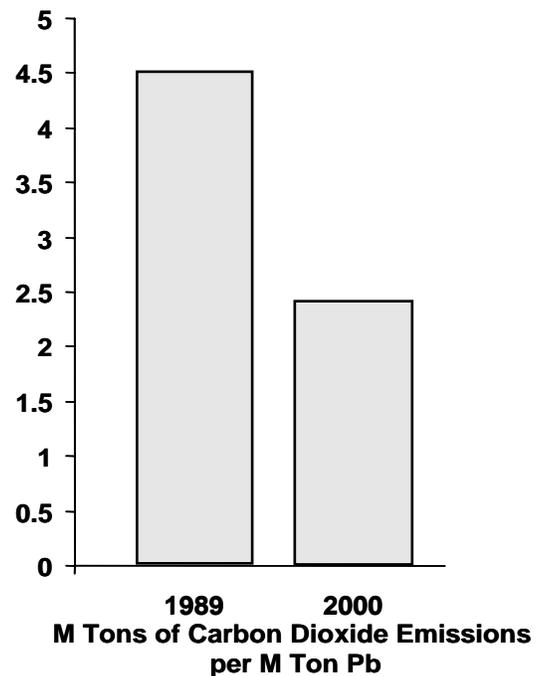


Chart 4. Relative Changes in Greenhouse Gas Emissions 1989 - 2000

With the anticipated closure of the Brunswick mine in the year 2008, the Brunswick smelter and workforce face an uncertain future. The business unit must compete successfully for further capital investment, lead concentrate and any other suitable feed materials to stake a claim as a successful custom smelter or face the possibility of closure after an operating life of approximately 40 years. In the interim, Noranda remains committed to continually improve the social, economic and environmental performance of the facility and the occupational health and welfare of the workforce.

ILMC Attends Bangkok Workshop to Promote ESM in South East Asia

This [workshop](#), held in September last year, was the first in a series designed to enact the "[Plan of Action](#)" adopted by the 10th session of the United Nations Conference on Trade and Development (UNCTAD) in Bangkok in February 2000. These [workshops](#) also form part of the priority activities to implement the [Ministerial Declaration on Environmentally Sound Management](#) (ESM), adopted by the 5th Conference of the Parties to the Basel Convention in December 1999. In this context, UNCTAD, principally in conjunction with UNEP and the OECD, were tasked "to find out how economic instruments can contribute to ESM".



*Dr. Li Jinhui,
Tsinghua
University,
Beijing*

The workshop series is being implemented by UNCTAD, with the active support of the [Asia-Pacific Regional Center for Hazardous Waste Management Training and Technology Transfer](#) at Tsinghua University in Beijing, together with the [Thailand Environment Institute](#) as the main coordinator.

Representation from each country was tri-par-tite, that is, where possible delegations comprised of an environmental NGO, a government trade and industry officer, and a chief executive from the private sector.

ILMC Program Manager, Brian Wilson, [Philippine Recyclers](#)' (PRI) Director, Irving Guerrero, and ILMC PAG member and head of the [Asian Pacific Round Table for Cleaner Production](#), Dr. Olivia Castillo, shared with the delegates their respective experiences in raising the standards of environmental performance of secondary lead plants in the Philippines. Irving Guerrero explained that the foundation of the PRI's policy towards establishing ESM was the attainment of ISO 14001, which was achieved

just over a year ago. Furthermore the company's battery recycling plant outside Manila was now in compliance with the environmental standards of the Government's Environmental Management Bureau (EMB).



*Mr Irving
Guerrero,
Director,
Philippine
Recyclers
Inc.*

Brian Wilson emphasized the need for all the interested stakeholders to work together constructively to ensure that policies and procedures were put in place that are practicable, meaningful, effective and sustainable.

Following presentations and several discussion sessions involving delegates from Thailand, India, the Philippines, Saudi Arabia, South Africa, China and an overview by UNCTAD's Ulrich Hoffmann, the delegates agreed that a template on the various ESM elements should be developed, to reflect a country's diversity and experience. ULAB recycling would serve as a good example, especially as there was a considerable amount of information available. The delegates elected Dr. Rajagopalan from the [Ministry of Environment and Forests](#) in India as facilitator for the workshop series and he established a steering committee to collect essential analytical data for the next workshop.

[NewsCasting](#) is published quarterly by the International Lead Management Center, a not-for-profit organization established by the International Lead Community in response to the need for international action on the issue of lead risk reduction. Please direct correspondence to :

International Lead Management Center
P.O. Box 14189
Research Triangle Park, NC, 27709
United States of America
Telephone : ++ (1) 919 361 2446
Facsimile : ++ (1) 919 361 1957
Internet : <http://www.ilmc.org/>
e-mail : <mailto:mail@ilmc.org>